

MEMORANDUM FOR THE DIRECTOR, BUREAU OF MINES, WASHINGTON, D.C., JANUARY 1, 1957

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Summary of Trip

Purpose of this trip was to provide background information on the suppression tests of uranium ore dusts.

Equipment and Recommendations

The health and safety problem was much more serious than dust samples were collected. The previous tests were well held. This Commission Guide - 100 (100 per cubic meter of air).

It was successful in that an explosion of fluoride and free magnesium was not used in the suppression tests. The test was successful. The test was successful. The test was successful.

Persons Visited

C. Cole - East Engineer
J. Williams - Engineer, Protection Systems

Description of Trip

The original 23 pounds of magnesium fluoride fines sent to Fenwal for the tests last November were used. The explosion vessel was equipped with safety devices including an explosion relief system vented to the atmosphere. However, the amount of radioactive material involved did not present a radiological problem to employees of Fenwal or to the general public.

An explosion occurred in the test vessel in the first of two tests because the CB (chlorobromomethane) extinguishing agent did not suppress the exploding mixture of magnesium fluoride plus 50 percent by weight free magnesium. In the second test Freon 1301 was successfully used and decontamination then followed.

Decontamination

The test vessel and equipment were wiped with water soaked rags. The contaminated rags are being returned to NRC along with the contaminated magnesium fluoride used for the tests. Contact radiation measurements of the cleaned equipment were taken with portable survey meters. The low range beta-gamma survey instrument and the alpha survey instrument showed no radiation levels above natural background.

Miscellaneous Comments

The personnel at Fenwal were very receptive and had practically everything ready for testing upon my arrival. A minimum of delay occurred between tests and at the end they seemed pleased with the successful explosion suppression and the decontamination of their test vessel.

Commitments

None.

ORIGINAL SIGNED BY

F. J. Klein

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cc: H. M. Burns
R. Mode - A. F. Pennak
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